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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,347	04/29/2005	Gopal Iyengar	0329.72899	9002

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EXAMINER

CORDRAY, DENNIS R

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 04/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/533,347

Applicant(s)

IYENGAR ET AL.

Examiner

Dennis Cordray

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4/29/05</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 4-6 and 9-15 recite compositions "per ton of furnish." It is not clear whether the weight of the furnish is based on the weight of the dry materials in the furnish or the wet and dry materials. It is assumed, for the purpose of this examination, that the basis is the weight of the dry materials in the furnish.

Claims 8 and 15 recite a water absorption of less than 400 cgs. It is not clear whether the units recited are to be centigrams (common abbreviation cg), centigrams per stere, or some other unit. The Specification gives no further guidance other than to state that the test was based on the amount of water absorbed by a 6" X 6" paperboard sample submerged in a water bath for 10 minutes.

Claims 2-3 and 7 are dependent on and thus inherit the indefiniteness of the rejected claims.

Claim Rejections - 35 USC § 102

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4-6 and 8-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Lindgren et al (5374335).

Lindgren et al discloses a sized paperboard (Abstract) comprising

- an aluminum compound, which can be alum, in an amount up to 5 kg (11 lb)/ton of dry furnish (col 7, lines 41-45 and 61-62; col 8, lines 28-30),
- a sizing compound of a zeolite (col 2, lines 27-29) in an amount of 0.05 to 50 kg/ton (0.11 to 110 lb/ton) of dry furnish (col 4, lines 33-35),
- an optional additional conventional sizing agent (i.e.-AKD or ASA) in an amount of 0.1 to 15 kg/ton (0.22 to 33 lb/ton) of dry furnish (col 5, lines 46-49 and 62-68; col 6, lines 1-2),
- a cationic starch in an amount of 0.01 to 20 kg/ton (0.022 to 33 lb/ton) of dry furnish (col 6, lines 16-20 and 30-38). Cationic starch is also a known dry strength agent (see Ikeda et al, 5438037, col 8, lines 10-13 if evidence is needed), thus the claimed amounts of both cationized starch and additional dry strength agent fall within the amount of starch disclosed by Lindgren et al.
- silica microparticles in an amount of 0.05 to 30 kg/ton (0.11 to 66 lb/ton) of dry furnish (col 6, lines 49-52 and 56-58; col 7, lines 1-4 and 24-26).

The compositions disclosed by Lindgren et al substantially overlap and thus anticipate the claimed composition. The sized paperboard of Lindgren et al is capable of having the claimed water absorption because, where the claimed and prior art apparatus or product are identical or substantially identical in structure or composition, a

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prima facie case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). In other words, when the structure recited in the reference is substantially identical to that of the claims, the claimed properties or functions are presumed to be inherent.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindgren et al (US 2002/0096290) in view of Lindgren et al (5374335) and further in view of Comer (3876165) and Model (5713289).

Lindgren et al ('290) discloses a sized paperboard comprising (pp 9-10, Examples 1-5).

pulp fibers refined to 200 CSF,

- cationic starch in an amount from 5-12 kg/tonne (10-24 lb/ton) of dry stock,
- a sizing agent in an amount from 0.115-0.5 kg/tonne (0.23 to 1 lb/ton) of dry stock,
- silica particles in an amount from 0 –1.0 kg/tonne (0 to 2 lb/ton) of dry stock,

Lindgren et al ('290) does not disclose an amount of dry strength agent or alum added to the composition. Lindgren et al ('290) does disclose that alum can also be

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added to improve sizing efficiency (p 8, par 59). Lindgren et al ('290) also does not disclose making a spirally wound core using the paperboard. Lindgren et al ('290) discloses that the sizing is particularly useful for making papers and paperboard from recycled fibers (p 9, par 63) but does not disclose the claimed composition of the furnish (i.e.-doubleliner Kraft, recycled paperboard containers and core waste).

Lindgren et al ('335), as previously discussed, discloses the use of alum in the claimed range with similar sizing compositions used for sizing paperboard. Lindgren et al ('335) is also does not disclose the claimed composition of the furnish or making a spirally wound core using the paperboard.

The instant Specification teaches on p 1, lines 8-9 that cores are conventionally manufactured from laminated, spirally wound paperboard.

Comer et al discloses a spirally wound paperboard core and teaches that it is usually desirable for economic reasons to use a low grade inexpensive paper, such as chip grade paperboard made from recycled paper for the core (Abstract; col 2, lines 52-61).

Model discloses a paperboard structure having high strength (a pallet and pallet foot) made from shredded corrugated waste. Model teaches that doubled lined Kraft (DLK) is a standard waste product from almost every corrugated sheet and box plant and that the DLK scraps are usually sent out to be recycled (Abstract; col 5, lines 53-56).

The art of Lindgren et al ('290), Lindgren et al ('335), Comer, Model and the instant invention are analogous as pertaining to the art of making paperboard products.

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It would have been obvious to one skilled in the art to make a spirally wound paperboard core having the claimed sizing composition with the paperboard of Lindgren et al ('290) in view of Lindgren et al ('335) and further in view of Comer and Model as a well known conventional use of such paperboard. No particular advantage was discussed in the instant Specification for using the recited furnish composition, the strength and water resistant benefits being derived from the additives. On p 2, lines 4-5, the Specification states that the paperboard is made from a standard paperboard furnish. It would thus have been obvious to one of ordinary skill in the art to use the claimed furnish composition as a standard paperboard furnish. The sized paperboard of Lindgren et al ('290) in view of Lindgren et al ('335) and further in view of Comer and Model is capable of having the claimed water absorption because, where the claimed and prior art apparatus or product are identical or substantially identical in structure or composition, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). In other words, when the structure recited in the reference is substantially identical to that of the claims, the claimed properties or functions are presumed to be inherent.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure [Mazzarella et al (4214948), Payton et al (5961783)]. They pertain to other strength and sizing compositions used with paperboard.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Cordray whose telephone number is 571-272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


DRC


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